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PATENT  
Docket No. 49933US031  
(formerly 49933USA6H)IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): HOOPMAN et al. ) Group Art Unit: 1722  
Serial No.: 09/520,032 ) Examiner: Joseph S. Del Sole  
Confirmation No.: 9385 )  
Filed: 6 March 2000 )  
For: TOOLS TO MANUFACTURE ABRASIVE ARTICLES

FACSIMILE TRANSMISSION TO THE PTO

Mail Stop Amendment  
Commissioner for Patents  
Attn: Examiner Joseph S. Del Sole  
P.O. Box 1450  
Alexandria, VA 22313-1450

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Muetting, Raasch &amp; Gebhardt, P.A.

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RESPONSE

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

The Office Action mailed 30 December 2004 has been received and reviewed. Claims 17, 19-21, 25-28, 33-54, 94-96, and 98-111 remain pending. Reconsideration and withdrawal of the rejections are respectfully requested.

Allowable Claims

Applicants note that claim 19 is indicated as allowable and that claim 17 would be allowable but for the double patenting rejection.

Obviousness-Type Double Patenting Rejection

Claims 17, 20, 21, 25-28, 33-54, 94-96, and 98-111 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 23, 24, 30-32, 89, 90, 92, 93, and 133-148 of co-pending application no. 09/955,604. Upon an indication of otherwise allowable subject matter and in the event this rejection is maintained, Applicants will provide an appropriate response.

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**The 35 U.S.C. §103 Rejection**

Claims 20, 21, 25-28, 33-54, 94-96, and 98-111 were rejected under 35 U.S.C. §103(a) as being unpatentable over Pieper et al. (U.S. Patent No. 5,152,917) in view of Rochlis (U.S. Patent No. 3,312,583) and either of Larson (U.S. Patent No. 4,903,440) or Bloecher et al. (U.S. Patent No. 4,799,939). This rejection is respectfully traversed.

The present application is a continuation application that, through a line of applications, is entitled to the benefit of a September 13, 1993 effective filing date. As before, Applicants expressly reserve the right to establish a date of invention for the claims subject to this rejection before the effective date of Pieper et al. at a later time. At present, however, Applicants will address this rejection on its merits.

To support a *prima facie* case of obviousness under 35 U.S.C. §103(a), three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves, the knowledge generally available to one of ordinary skill in the art, or the nature of the problem involved, to modify a reference or combine reference teachings. Second, there must be a reasonable expectation of success, i.e., a reasonable expectation that the benefit result will be achieved. And third, the prior art reference(s) must teach or suggest all the elements and limitations of the claims of the Application. Applicants respectfully assert that the asserted obviousness rejection does not meet all these criteria, and therefore fails to set forth a *prima facie* case of obviousness.

The proposed rejection is premised on the following asserted motivation to modify/combine the cited references: "It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have to have (*sic*) modified the abrasive article production tool (a pile-like product) of Pieper et al with the cavities of varied dimensions as taught by the production tool of Rochlis because it enables a production tool capable of producing an abrasive article (pile like articles) with an almost indefinite number of specifically different physical characteristics, presenting many different visual, textural and other effects and it would have been obvious to desire cavities that produce such a varied collection of abrasive

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member sizes and shapes as taught by Larson and Bloecher because such variations achieve a high rate of cut and optimize cut rate, life of the abrasive article and surface finish on the workpiece as well as improve grinding performance." Office Action, p. 6 (December 30, 2004).

Applicants respectfully submit that the asserted motivation to combine/modify the references does not meet the requirements for a *prima facie* case of obviousness. "If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." MPEP § 2143.01, p. 2100-131, 8<sup>th</sup> Ed. (Rev. 2, May 2004) (citing *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)).

The inventions described in Pieper et al. were developed because the prior art abrasive articles "lack a high degree of consistency. If the abrasive article is made via a conventional process, the adhesive or binder system can flow before or during curing, thereby adversely affecting product consistency." Pieper et al., col. 1, lines 57-61. To address the problems of inconsistency, Pieper et al. describe abrasive articles and tools for making the abrasive articles that provide consistency or uniformity. "The more consistent an abrasive article of this invention, the more consistent will be the finish imparted by the abrasive article to the workpiece. An abrasive article having an ordered profile has a high level of consistency, since the height of the peaks of the abrasive composites will normally not vary by more than 10%." *Id.* at col. 7, lines 63-68. In other words, Pieper et al. teaches that consistency and uniformity are the objectives in the abrasive articles (and, therefore, the tools used to manufacture them). This interpretation is strengthened by a review of the figures of Pieper et al., all of which depict consistent, uniform abrasive articles/tools (except for those depicting the prior art).

Against that focus on consistency and uniformity, it is asserted in the Office Action that one of ordinary skill in the art would "have modified the abrasive article production tool . . . of Pieper et al with cavities of varied dimensions as taught by the production tool of Rochlis." Office Action, p. 6 (December 30, 2005). In other words, it is asserted that one of ordinary skill in the art would purposefully introduce variations contrary to the explicit teachings of Pieper et al.

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that variations and non-uniformities are to be avoided. Applicants respectfully submit that such an asserted modification "would render the prior art invention being modified [Pieper et al.] unsatisfactory for its intended purpose." As a result, the asserted motivation is negated and a *prima facie* case of obviousness has not been established.

The same arguments would, of course, apply to the asserted combination/modifications proposed in view of Larson and Bloecher because they also rely on modifications that would introduce variations or inconsistencies into the articles/tools of Pieper et al. The result is, again, that the asserted motivation is negated and a *prima facie* case of obviousness has not been established.

For at least the above reasons, Applicants respectfully submit that the rejection of claims 20, 21, 25-28, 33-54, 94-96, and 98-111 over Pieper et al. in view of Rochlis, and further in view of either Larson or Bloecher does not meet the requirements for a *prima facie* case of obviousness. Reconsideration and withdrawal of the rejection are, therefore, respectfully requested.

**Claims 20, 21, 33-54, and 98-111**

Of the claims subject to this rejection, a subset, namely claims 20, 21, 33-54, and 98-111, recite a production tool in the form of a roll. Applicants submit that when applied to a production tool in the form of a roll, the assertions with respect to the teachings of Rochlis are not supported by the reference itself, thus providing another basis on which a *prima facie* case of obviousness has not been established for at least claims 20, 21, 33-54, and 98-111.

It is asserted, for example, that the teachings of Figures 21 and 22 in Rochlis support many assertions made with respect to variations in cavity shapes. Applicants respectfully disagree.

Figures 21 and 22 of Rochlis disclose a tool with various geometrically shaped cavities. That tool, however, is in the form of a flat sheet, not a roll. To support the asserted rejection based, in part, on Rochlis, it is asserted that the variations in geometric shapes as seen in Figures

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21 and 22 could be adapted to use in a roll. Rochlis, however, does not teach or suggest the use of differently shaped cavities in a roll. Rather, Rochlis teaches only that variations in cavities can be used in connection with flat, laminated tools.

While it is unlikely that the specifically different type of plate holes schematically shown in FIGS. 21 and 22 will be employed in any given mold, nevertheless, these views show the wide variation of molding cavity outlines which may be built into a laminated mold in which the cavity formations extend from side-to-side of the constituent (*sic*) laminae rather than from edges thereof.

Rochlis, col. 13, lines 29-35.

As a result, any assertion that Rochlis provides support for geometric shape variations in rolls is not supported by the reference and cannot form the basis for a *prima facie* case of obviousness with respect to claims 20, 21, 33-54, and 98-111.

For at least the above reasons, Applicants respectfully submit that the rejection of claims 20, 21, 33-54, and 98-111 over Pieper et al. in view of Rochlis, and further in view of either Larson or Bloecher does not meet the requirements for a *prima facie* case of obviousness. Reconsideration and withdrawal of the rejection are, therefore, respectfully requested.